

WHAT IS CLAIMED IS:

1. A double-sided printing apparatus which prints slips on both sides of an elongated sheet having page breaks while transporting the sheet, and which is provided with a first printer for printing a slip on the obverse of the sheet and a second printer disposed downstream of a sheet transportation path for printing a slip on the reverse of the sheet, the double-sided printing apparatus comprising:

a first printing control unit which, upon receiving printing data including page-number information for each of slips, allows the first printer to print one slip per page or sequentially print a plurality of slips per page on the obverse of the sheet according to sizes of slips, by selecting printing data for printing a slip on the obverse of the sheet out of the printing data received from a printing data transmitter, and also allows the first printer to print a mark representing a page-number of the slip to be printed on the obverse of the sheet in a position thereof,

wherein the second printer includes a mark reading sensor for reading the mark printed by the first printer, and

wherein the double-sided printing apparatus further comprises a second printing control unit which, upon receiving, from the first printing control unit, printing data including page-number information for printing a slip on the reverse of one page of the sheet as well as size

information of a slip to be printed on the obverse of the same page, generates a reading timing signal for the mark reading sensor to read the mark, and compares page-number information obtained by reading the mark printed on the obverse of the one page of the sheet by using the mark reading sensor with page-number information included in the printing data for printing the slip on the reverse received from the first printing control unit, so as to allow the second printer to print, on the reverse of the one page of the sheet, a slip having a page-number following the page-number of the slip which has been printed on the obverse of the same page.

2. A double-sided printing apparatus according to claim 1, wherein, based on a result of a comparison between the page-number information obtained by reading the mark printed on the obverse of the one page of the sheet by using the mark reading sensor and the page-number information included in the printing data received from the first printing control unit, the second printing control unit instructs the second printer to print on the reverse of the one page of the sheet a slip having the page-number following that of the slip printed on the obverse of the same page, otherwise, the second printing control unit sends an error notice to the first printing control unit without instructing the second printer to perform any printing, and

wherein the first printing control unit determines whether or not the error notice is received, and instructs the first printer to start printing of a slip on the obverse of the next page of the sheet when no error notice is received.

3. A double-sided printing apparatus according to claim 1, further comprising a sheet reversing device which is interposed between the first printer and the second printer on the sheet transportation path and which turns over the sheet being transported.

4. A double-sided printing apparatus according to claim 1, wherein each of the first printer and the second printer forms an electrostatic latent image and forms a toner image by developing the electrostatic latent image with a toner, so as to form a slip image on the sheet by transferring and fixing the toner image on the sheet.

5. A double-sided printing apparatus according to claim 1, wherein each of the first printer and the second printer is a printer of an ink jet system.

6. A double-sided printing apparatus according to claim 1, wherein the first printer is adapted to print a bar code as the mark.

7. A double-sided printing apparatus according to claim 1, further comprising an operating member which accepts input of the length per page of the elongated sheet,

wherein the first printing control unit selects the printing data for printing the slip on the obverse of the sheet based on the length of the page which has been input through the operator.

8. A double-sided printing apparatus according to claim 1, further comprising a transportation path on which the sheet is transported from the first printer to the second printer while keeping the obverse and reverse of the sheet facing in predetermined respective directions, and

wherein the second printer is adapted to print the slip on the reverse of the sheet while keeping the obverse and reverse of the sheet facing in the predetermined respective directions.

9. A double-sided printing method for printing slips on both sides of an elongated sheet having page breaks while transporting the sheet, by printing a slip on the obverse of the sheet using a first printer and by printing a slip on the reverse of the sheet using a second printer that is disposed downstream of a sheet transportation path, the double-sided printing method comprising the steps of:

upon receiving printing data including page-number information for each of slips, selecting printing data for

printing a slip on the obverse of the sheet out of the printing data which has been received;

instructing printing on the obverse by allowing the first printer to print one slip per page or to sequentially print a plurality of slips per page on the obverse of the sheet according to sizes of slips, and also to print a mark representing a page-number of the slip to be printed on the obverse of the sheet in a position thereof;

instructing the second printer to read the mark printed by the first printer using a mark reading sensor;

generating a reading timing signal for the second printer to read the mark, upon receiving printing data including page-number information for printing a slip on the reverse of one page of the sheet as well as size information of a slip to be printed on the obverse of the same page;

comparing page-number information by making a comparison between page-number information obtained by reading the mark printed on the obverse of the one page of the sheet by using the second printer and page-number information included in the printing data for printing the slip on the reverse of the one page of the sheet which has been received; and

instructing printing on the reverse by allowing the second printer to print, on the reverse of the one page of the sheet, a slip having a page-number following that of

the slip which has been printed on the obverse of the same page.

10. A double-sided printing method according to claim 9, further comprising:

based on a result of a comparison between the page-number information obtained by reading the mark printed on the obverse of the one page of the sheet by using the mark reading sensor and the page-number information included in the printing data received, sending an error notice to the first printer without instructing the second printer to perform any printing; and

determining whether or not the error notice is received from the second printer,

wherein the step of instructing printing on the reverse is the step of instructing the second printer to print, on the reverse of the one page of the sheet, the slip having the page-number following that of the slip printed on the obverse of the same page, based on a result of a comparison made in the step of comparing page-number information, and

wherein the step of instructing printing on the obverse is the step of instructing the first printer to start printing of a slip on the obverse of the next page of the sheet when that no error notice is received is determined in the step of determining whether or not the error notice is received.

11. A double-sided printing method according to claim 9, wherein a sheet reversing device is interposed between the first printer and the second printer on the sheet transportation path and which turns over the sheet being transported.

12. A double-sided printing method according to claim 9, wherein each of the first printer and the second printer forms an electrostatic latent image and forms a toner image by developing the electrostatic latent image with a toner, so as to form a slip image on the sheet by transferring and fixing the toner image on the sheet.

13. A double-sided printing method according to claim 9, wherein each of the first printer and the second printer is a printer of an ink jet system.

14. A double-sided printing method according to claim 9, wherein a bar code is printed as the mark in the step of instructing printing on the obverse.

15. A double-sided printing method according to claim 9, wherein the step of selecting printing data for printing a slip on the obverse of the sheet is the step of acquiring the length of each of pages of the elongated sheet and selecting the printing data for printing the slip on the

obverse of the sheet based on the acquired length of the page.

16. A double-sided printing method according to claim 9, wherein the sheet transportation path is a path on which the sheet is transported from the first printer to the second printer while keeping the obverse and reverse of the sheet facing in predetermined respective directions, and

wherein the second printer is adapted to print the slip on the reverse of the sheet while keeping the obverse and reverse of the sheet facing in the predetermined respective directions.